

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	BRS	L1	33	("lithium niobate" or linbo3) and euler adj1 angles\$1	USPAT	2007/08/28 14:41	
2	BRS	L2	14	("lithium niobate" or linbo3) and euler adj1 angles\$1	US-PGPUB	2007/08/28 14:54	
3	BRS	L3	5	("lithium niobate" or linbo3) and euler adj1 angles\$1	USOCR; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/28 15:11	
4	BRS	L4	0	("lithium niobate" or linbo3) and stonely	USOCR; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/28 15:11	
5	BRS	L5	10	("lithium niobate" or linbo3) and stonely	US-PGPUB; USPAT	2007/08/28 15:15	
6	BRS	L6	292	("lithium niobate" or linbo3) and "acoustic velocity"	US-PGPUB; USPAT	2007/08/28 15:31	
7	BRS	L7	12	("lithium niobate" or linbo3) and "acoustic velocity" and euler	US-PGPUB; USPAT	2007/08/28 15:31	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
8	BRS	L8	10459 91	stoneley wave	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/2 8 16:01	
9	BRS	L9	257	"stoneley wave"	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/2 8 16:02	
10	BRS	L10	34	"stoneley wave" not borehole	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/2 8 16:16	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
11	BRS	L11	55	boundary adj3 wave and (linbo3 or "lithium niobate")	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/2 8 16:17	
12	BRS	L12	1	boundary adj3 wave and (linbo3 or "lithium niobate") and euler	US- PGPUB ; USPAT ; USOCR ; FPRS; EPO; JPO; DERWE NT; IBM_T DB	2007/08/2 8 16:17	

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AND

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lithium niobate

AND

AND

euler

AND

AND

AND

AND

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AND

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7 results found in the Worldwide database for:

**acoustic** in the title AND **"lithium niobate"** and **euler** in the title or abstract

(Results are sorted by date of upload in database)

- 1 Surface acoustic wave devices using optimized cuts of lithium niobate (LiNbO3)**  
Inventor: NAUMENKO NATALYA F (RU); ABBOTT BENJAMIN P (US)  
EC: H03H9/02S2B  
Publication info: **US2003080831** - 2003-05-01  
Applicant:  
IPC: **H03H9/02; H03H9/02**; (IPC1-7): H03H9/64
- 2 SURFACE ACOUSTIC WAVE ELEMENT**  
Inventor: SHIMIZU YASUTAKA; NISHIKATA ATSUHIRO; Applicant: SHIMIZU YASUTAKA; SANYO ELECTRIC CO (+1)  
EC:  
Publication info: **JP9331229** - 1997-12-22  
IPC: **H03H9/25; H03H9/00**; (IPC1-7): H03H9/25
- 3 SURFACE ACOUSTIC WAVE ELEMENT AND PORTABLE TELEPHONE SET USING THE SAME**  
Inventor: SHIMIZU YASUTAKA (JP); NISHIKATA ATSUHIRO; (+1)  
EC: H03H9/02S2B  
Publication info: **WO9733368** - 1997-09-12  
Applicant: SANYO ELECTRIC CO (JP); SHIMIZU YASUTAKA (JP)  
IPC: **H03H9/02; H03H9/02**; (IPC1-7): H03H9/145 (+2)
- 4 SURFACE ACOUSTIC WAVE FILTER**  
Inventor: MATSUI KUNIYUKI; HIRAO YASUHIRO; (+6)  
EC:  
Publication info: **JP8340234** - 1996-12-24  
Applicant: SANYO ELECTRIC CO; SHIMIZU YASUTAKA  
IPC: **H03H9/25; H03H9/64; H03H9/00** (+2)
- 5 SURFACE ACOUSTIC WAVE FILTER**  
Inventor: MATSUI KUNIYUKI; HIRAO YASUHIRO; (+6)  
EC: H03H9/64E3  
Publication info: **JP8340232** - 1996-12-24  
Applicant: SANYO ELECTRIC CO (JP); SHIMIZU YASUTAKA (JP)  
IPC: **H03H9/25; H03H9/64; H03H9/02** (+4)
- 6 SURFACE ACOUSTIC WAVE ELEMENT**  
Inventor: SHIMIZU YASUTAKA; NISHIKATA ATSUHIRO; Applicant: SHIMIZU YASUTAKA; SANYO ELECTRIC CO (+1)  
EC:  
Publication info: **JP8316781** - 1996-11-29  
IPC: **H03H9/25; H03H9/00**; (IPC1-7): H03H9/25
- 7 SURFACE ACOUSTIC WAVE ELEMENT**  
Inventor: KOBAYASHI TAIZO; MATSUI KUNIYUKI; (+6)  
EC: H03H9/02S2B; H03H9/02S8B  
Publication info: **JP8288788** - 1996-11-01  
Applicant: SANYO ELECTRIC CO; SHIMIZU YASUTAKA  
IPC: **H03H3/08; H03H9/02; H03H9/145** (+8)

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4 results found in the Worldwide database for:  
**boundary and wave and euler** in the title or abstract  
(Results are sorted by date of upload in database)

**1 ELASTIC BOUNDARY WAVE ELEMENT**

Inventor: YAMADA AKINORI

Applicant: SEIKO EPSON CORP

EC:

IPC: **H03H9/25; H03H9/00**Publication info: **JP2007053670** - 2007-03-01**2 ELASTIC BOUNDARY WAVE ELEMENT**

Inventor: YAMADA AKINORI

Applicant: SEIKO EPSON CORP

EC:

IPC: **H03H9/25; H03H9/00**Publication info: **JP2007049482** - 2007-02-22**3 ELASTIC BOUNDARY WAVE APPARATUS**

Inventor: SHINDO HAJIME

Applicant: MURATA MANUFACTURING CO

EC:

IPC: **H03H9/145; H03H9/25; H03H9/145 (+1)**Publication info: **JP2007036344** - 2007-02-08**4 Method for providing a piezoelectric substrate and surface acoustic wave device with reduced bulk acoustic wave scattering**

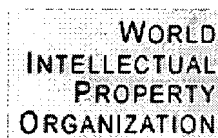
Inventor: PENUNURI DAVID (US)

Applicant: MOTOROLA INC (US)

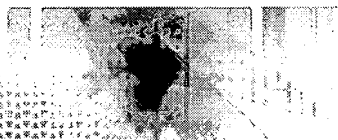
EC: **H03H3/08; H03H9/02S2B**IPC: **H04R17/00; H01L41/09; H01L41/22 (+13)**Publication info: **US5896636** - 1999-04-27

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**"stoneley wave" and euler and boundary and ( linbo3 or "lithium niobate" ); 0 records**

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**Refine Search**

**"stoneley wave" and euler and boundary and (linbo3 or**



No records matching your query found in PCT

**Search Summary**



**"stoneley wave"**: 559 occurrences in 33 records.

**euler**: 4554 occurrences in 1218 records.

**("stoneley wave" AND euler)**: 1 record.

**boundary**: 299495 occurrences in 52106 records..

**((("stoneley wave" AND euler) AND boundary)**: 1 record.

**linbo3**: 1867 occurrences in 782 records.

**"lithium niobate"**: 6752 occurrences in 1804 records.

**(linbo3 OR "lithium niobate")**: 2269 records.

**((("stoneley wave" AND euler) AND boundary) AND (linbo3 OR "lithium niobate"))**: 0 records.

Search Time: 8.06 seconds.





## Results of searching in PCT for:

( "stoneley wave" or boundary ) and euler and ( linbo3 or "lithium niobate" ): 3 records

Showing records 1 to 3 of 3 :

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Refine Search

("stoneley wave" or boundary) and euler and (linbo3 or



- | Title   | Pub. Date  | Int. Class | App. Num          | Applicant          |
|---|------------|------------|-------------------|--------------------|
| 1. <u>(WO 2004/006431) SAW FILTER DEVICE AND METHOD EMPLOYING NORMAL TEMPERATURE BONDING FOR PRODUCING DESIRABLE FILTER PRODUCTION AND PERFORMANCE CHARACTERISTICS</u>  | 15.01.2004 | H03H 9/02  | PCT/US2003/018143 | SAWTEK, INC.       |
| <p>A SAW filter (10) includes a piezoelectric substrate (16) of <b>Lithium Niobate</b> or optionally Lithium Tantalate having a thickness of at least twice an acoustic wavelength. The piezoelectric substrate (16) is bonded to a surrogate substrate (18) of a silicon material. The surrogate substrate (18) is characterized by a resistivity of at least 100 ohm-cm and an expansion coefficient compatible with the piezoelectric substrate (16). A catalytic bonding film (20) between the piezoelectric substrate (16) and the surrogate substrate (18) is formed from a first catalytic bonding film deposited onto a surface of the piezoelectric substrate (16) and a second catalytic bonding film deposited onto a surface of the surrogate substrate (18). The piezoelect...</p>   |            |            |                   |                    |
| 2. <u>(WO 2004/004119) SINGLE CRYSTAL SUBSTRATE AND CUTTING METHOD THEREOF</u>  | 08.01.2004 | H03H 9/02  | PCT/KR2003/001239 | LG INNOTEK CO.,LTD |
| <p>Disclosed is a single crystal substrate and a cutting method thereof. A single crystal substrate includes a langasite substrate with a SAW propagation surface; and input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the langasite substrate having a crystal orientation defined by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by <b>Euler</b> angles <math>\sim</math>, <math>\delta</math> and <math>\gamma</math>, in which <math>\sim</math> is in a range of <math>8^\circ \leq \sim \leq 25^\circ</math>, <math>\delta</math> is i...</p>   |            |            |                   |                    |
| 3. <u>(WO 2002/019522) SURFACE ACOUSTIC WAVE DEVICES USING NON-SYMMETRIC OPTIMIZED CUTS OF A PIEZOELECTRIC SUBSTRATE</u>  | 07.03.2002 | H03H 9/02  | PCT/US2001/014347 | SAWTEK INC.        |
| <p>A surface acoustic wave device includes a piezoelectric substrate of a single crystal <math>\text{LiTaO}_3</math> and an electrode pattern provided on a surface of the piezoelectric substrate which forms a resonator having an electrode thickness in a range of about 1 % to about 15 % of an acoustic wavelength of a surface acoustic wave excited on the surface of the substrate. The piezoelectric substrate has non-symmetric orientation defined by <b>Euler</b> angles (<math>\\$g(l)</math>, <math>\\$g(m)</math>, <math>\\$g(u)</math>), with angle <math>\\$g(l)</math> in a range from <math>-4^\circ</math> to <math>+4^\circ</math>, angle <math>\\$g(m)</math> in a range from about <math>-52^\circ</math> to about <math>-36^\circ</math>, and angle <math>\\$g(u)</math> in a range from about <math>(-1.365 \\$g(l) - 4)^\circ</math> to <math>(-1.365 \\$g(l) + 4)^\circ</math>. Such orientations simultaneously combined with an optimized propagation loss at resonant and anti-re...</p> |            |            |                   |                    |

## Search Summary

**"stoneley wave"**: 559 occurrences in 33 records.**boundary**: 299495 occurrences in 52106 records.

("stoneley wave" OR boundary): 52116 records.

**euler**: 4554 occurrences in 1218 records.

(("stoneley wave" OR boundary) AND euler): 273 records.

**linbo3**: 1867 occurrences in 782 records.**"lithium niobate"**: 6752 occurrences in 1804 records.



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Query :

((boundary or stoneley)) <AND> ( ( (e

Query: ((boundary or stoneley)) <AND> ( ( (euler) ) <in> abstract ) <AND>  
( ( (linbo3 or "lithium niobate") ) <in> claims )

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